



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 09/806,180 | 06/05/2001 | Stephen William Colley | KPT 1090 | 5384 |

7590 08/16/2004
Senniger Powers Leavitt & Roedel
One Metropolitan Square 16th Floor
St Louis, MO 63102

| |
|----------|
| EXAMINER |
|----------|

MANOHARAN, VIRGINIA

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1764

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,180

Applicant(s)

COLLEY ET AL.

Examiner

Virginia Manoharan

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology often used in patent claims such as "comprising" and comprises "in lines 3,4 & 7. Correction is required. See MPEP § 608.01(b).

The specification had not been checked to the extent necessary to determine the presence of all possible minor errors e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperations are requested in correcting any errors of which applicants may become aware in the specification.

Claims 1-14 are objected to because of the following informalities:

The term "pure" numerously recited in the claims should be-purified- since "pure" is a relative term.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10, 11, 13, & 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0151886.

EP '866 is deemed to anticipates of renders obvious the claimed " .. process for the recovery of substantially pure ethyl acetate from a feedstock comprising ethyl acetate, ethanol and water which comprises:

(a) providing a first distillation zone maintained under distillation conditions which include use of a first distillation pressure, which are effective for distillation from a mixture comprising ethyl acetate, ethanol and water of a first distillate comprising ethyl acetate, ethanol, and not more than 10 mol % water, and which yield an ethanol, rich bottom product comprising ethanol and water;

(b) providing a second distillation zone maintained under distillation conditions which include use of a second distillation condition which include use of a second distillation pressure higher than the first distillation pressure, from a mixture comprising ethyl acetate, ethanol and water of a second distillate comprising ethanol, water, and a minor proportion of ethyl acetate, and which yield a substantially pure ethyl acetate bottom product;

(c) Supplying to a zone selected from the first distillation zone and the second distillation zone a feedstock comprising ethyl acetate, ethanol and water;

(d) Recovering a first distillate comprising ethyl acetate, ethanol, and not more than about 10 mol 5 water from the first distillation zone;

(e) supplying material of the first distillate to the second distillation zone.

(f) recovering an ethanol rich bottom product comprising ethanol and water from the first distillation acetate bottom product from the second distillation zone;

(h) recovering a second distillate comprising ethanol, water, and a minor proportion of ethyl acetate from the second distillation; and

(i) recycling material of the second distillate of step.

(h) to the first distillation zone" as claimed e.g., in claim 1. EP '866 also anticipates or renders obvious the claimed pressures as further claimed in claims 3-6 and the features of claims 8 & 12. See e.g., the process depicted in Fig. 3 of the EP '866 as well as the claims at cols. 24-26.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '866.

EP '866 is discussed supra.

The process wherein the ethanol rich stream recovered from the bottom part of the first distillation zone is subjected to treatment for the removal of water therefrom thereby to produce a relatively dry ethanol stream and the process wherein "the second distillate is recovered as an overhead stream from the second distillation zone, in which a bottom product comprising ethyl acetate is recovered from the second distillation zone, and in which the second distillate is returned to the first distillation zone at a point above the feed point of the feedstock to the first distillation zone" as claimed e.g., in claims 9 & 12 respectively are further rendered obvious by the EP '866. To remove water so as to obtain an anhydrous ethanol; and further to purify the second distillate by

second distillation would be obvious to an artisan especially since it is the bottom product that is desired to be separated as purified product.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a). Colley et al discloses the purification of alkyl alkanoate, e.g., ethyl acetate by a series of distillation steps .

(b). GB '846 discloses the manufacturing of purified esters.

(c). GB '345 discloses a catalytic dehydrogenation process.

(d). Harrison et. al. discloses the continuous production of diarylcarbonates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-271-1450.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/806,180
Art Unit: 1764

Page 6

V. Manoharan/af
August 2, 2004


VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 128/1764
8/10/04